

# AGRICULTURAL BEET

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## ***Importance of effective spray equipment cleaning between seasons and cropping systems.***

We've all seen exposure of off-label crop protection products to a sugarbeet field from spray equipment contamination. Advancements in tank cleaning education and tank cleaner technologies have vastly reduced both the number and the extent of these misapplications, yet we still see symptomatic patterns in fields from time to time that are tell-tale evidence of chemistry residue remnants left in the tank from other cropping systems that were unsuccessfully removed or cleaned out of the tank when relying upon water rinses alone. (See photo at right taken from the NDSU publication shown below).



## **Herbicide Mode of Action and Sugar Beet Injury Symptoms**

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**NDSU** | EXTENSION

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So, what type of precautions should be considered to provide you with piece of mind in knowing that you are not spraying your beet crop with any products that could result in an adverse crop response?

When people think about sprayer hygiene, often they consider their tank, nozzles and/or nozzle assemblies only. But the reality is that sprayer systems must be viewed holistically from the holding tank all the way out to the spray tips and every single valve and connector along the way. Common places where previous chemistries can become lodged or hidden include but are not limited to hoses, screens, filters, pumps, and boom dead-ends as well as any of the abrasions, cracks, or surface pores and textures that exist with any of these materials.

Sugarbeet are ultra-sensitive to many herbicide families and can exhibit symptoms and potential crop response from very low doses. A few important keys to adequate removal of potentially potent remnant products in the sprayer system include timing, quantity, and in some cases physical scrubbing.

- Timing refers to cleaning immediately after spraying out a tank and before switching to another crop.
- Quantity relates to using adequate rinses, water, and tank cleaner to thoroughly clean the lines.
- Physical scrubbing involves hand-cleaning stubborn product residue accumulation areas with brushes or other cleaning material. These areas include nozzle assemblies, housings, and boom sections.
- There are cleanout videos on the web. Here is one: <https://www.youtube.com/watch?v=qEdqBw4bEVO>

One shareholder has incorporated a bottle brush method to clean his boom sections. He has figured out a way to affix an appropriately-sized bottle brush onto the end of a tile rod that is sufficiently long enough to clean his longest boom section. In utilizing his cleaning tool, he has noted a considerable amount of material removed from his sprayer boom that he used to feel had been adequately cleaned with tank cleaner and rinsation alone.

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